



## NASA Weekly Update

Week of May 14 - 21, 2007

**May 15: NASA's Shuttle Atlantis Rolls Back out to Launch Pad:** Space shuttle Atlantis is back at its launch pad at NASA's Kennedy Space Center, Fla. Teams are preparing Atlantis for its mission, STS-117, to the International Space Station. Launch is targeted



*Space Shuttle Atlantis rides a crawler transporter to Launch Complex 39A for the second time in preparation for STS-117*

for June 8. The flight readiness review meeting, where the official launch date is scheduled, will be held May 30-31 at Kennedy. During their 11-day mission, the astronauts will work with the space station crew and ground teams to install the girder-like S3/S4 truss segment, unfold a new set of solar arrays and retract one array on the starboard side of the station. For more information about the STS-117 crew and mission, visit: [www.nasa.gov/shuttle](http://www.nasa.gov/shuttle).

**May 23: NASA Sets Briefing to Preview Space Station Spacewalks:** NASA will preview a pair of International Space Station spacewalks during a briefing at 1 p.m. CDT Wednesday, May 23. The briefing from Johnson Space Center, Houston, will air live on NASA Television. For the spacewalks on May 30 and June 6, Expedition 15 Commander Fyodor Yurchikhin and Flight Engineer Oleg Kotov will wear

Russian Orlan spacesuits. They will install orbital debris protection panels on the Zvezda Service Module and replace experiments on the hull of Zvezda. Flight Engineer Suni Williams remain inside and monitor station systems. The May 30 spacewalk will begin at 1:20 p.m. NASA TV coverage will begin at 12:30 p.m. The start time for the June 6 spacewalk has yet to be determined. For NASA TV downlink, schedules and streaming video information, visit: <http://www.nasa.gov/ntv>. For more information about the crew's activities and station sighting opportunities, visit: <http://www.nasa.gov/station>.

**May 21: NASA Rededicates Flying Observatory on Lindbergh Anniversary:** Monday, NASA dedicated a unique astronomy aircraft to pioneering aviator Charles Lindbergh on the 80th anniversary of his historic transatlantic flight. Erik Lindbergh, the pilot's grandson, joined NASA for the event May 21, in Waco, Texas. NASA's new Stratospheric Observatory for Infrared Astronomy (SOFIA) is a highly modified 747 airliner that carries a 45,000-pound infrared telescope system. Pan American Airways originally christened the plane the "Clipper Lindbergh" in 1977. At the rededication ceremony, NASA officials discussed the similarities between Lindbergh's accomplishments and SOFIA's potential to capture scientifically important infrared images unavailable to earthbound telescopes.

**May 17: NASA Dryden Awards Facilities Maintenance Pact to Pride Industries:** NASA's Dryden Flight Research Center has awarded a sole-source contract to Pride Industries of Roseville, Calif., for facilities support and maintenance operations at the center, located at Edwards Air Force Base, Calif. Pride Industries is a nonprofit corporation focused on creating employment for people with disabilities. Some of the employees working on the Dryden contract will be people with severe disabilities.

**May 15: NASA Finds Vast Regions of West Antarctica Melted in Recent Past:** A team of NASA and university scientists has found clear evidence that extensive areas of snow melted in west Antarctica in

January 2005 in response to warm temperatures. This was the first widespread Antarctic melting ever detected with NASA's QuikScat satellite and the most significant melt observed using satellites during the past three decades. The affected regions encompass a combined area as big as California. For more information on QuikScat, visit: <http://winds.jpl.nasa.gov>.

**May 15: Astronomers Find Ring of Dark Matter with Hubble Space Telescope:** Astronomers using NASA's Hubble Space Telescope have discovered a ghostly ring of dark matter that formed long ago during a titanic collision between two galaxy clusters. Dark matter makes up most of the universe's material. Ordinary matter, which makes up stars and planets, comprises only a small percent of the universe's matter. The ring's discovery is among the strongest evidence yet that dark matter exists. To learn more about the Hubble Space Telescope, visit: [www.nasa.gov/hubble](http://www.nasa.gov/hubble).

## Weekly Status Reports



### Space Shuttle

Mission: STS-117 - 21st International Space Station Flight (13A) - S3/S4 Truss Segment Solar Arrays  
Vehicle: Atlantis (OV-104)  
Location: Launch Pad 39A  
Launch Date: Targeted for June 8, 2007  
Crew: Sturckow, Archambault, Reilly, Swanson, Forrester, Olivas and Anderson  
Inclination/Orbit Altitude: 51.6 degrees/122 nautical miles

Mission: STS-118 - 22nd International Space Station Flight (13A.1) - S5 Truss Segment  
Vehicle: Endeavour (OV-105)  
Location: Orbiter Processing Facility Bay 2  
Launch Date: Targeted for Aug. 9, 2007  
Launch Pad: 39A  
Crew: Kelly, Hobaugh, Williams, Morgan, Mastracchio, Caldwell and Drew  
Inclination/Orbit Altitude: 51.6 degrees/122 nautical miles

Mission: STS-120 - 23rd International Space Station Flight (10A) - U.S. Node 2  
Vehicle: Discovery (OV-103)  
Location: Orbiter Processing Facility Bay 3

Launch Date: Targeted for Oct. 20, 2007  
Launch Pad: 39A  
Crew: Melroy, Zamka, Parazynski, Wheelock, Wilson, Nespoli and Tani  
Inclination/Orbit Altitude: 51.6 degrees/122 nautical miles



### International Space Station (ISS)

This week, the Expedition 15 crew unpacked new supplies and began preparing for the arrival of the next visiting spacecraft and two upcoming spacewalks at the International Space Station. The ISS Progress 25 docked to the aft port of the Zvezda Service Module at 12:10 a.m. CDT Tuesday. During the week, the crew began unloading the more than 5,000 pounds of cargo from the supply ship.

Commander Fyodor Yurchikhin and Flight Engineer Oleg Kotov prepared for their May 30 and June 6 spacewalks by working on the Pirs Airlock. The cosmonauts will wear Russian Orlan spacesuits to install orbital debris protection panels on the Zvezda Service Module and replace experiments on the module's hull. Mission experts at NASA's Johnson Space Center, Houston, will provide an overview of the spacewalks in a news briefing at 1 p.m. Wednesday, May 23, on NASA Television.

The crew prepared for the arrival of space shuttle Atlantis, which is targeted to launch on June 8. Yurchikhin and Kotov practiced digital photography techniques for their role in the inspection of the shuttle's heat shield as it approaches the station for the joint STS-117 mission. Flight Engineer Suni Williams assembled a spacewalk tool and wrapped it in protective tape to be used if spacewalkers need help with retracting the P6 starboard solar array. For more about the crew's activities and station sighting opportunities, visit: <http://www.nasa.gov/station>.



### Upcoming Events

- **June 8:** Launch of Space Shuttle Atlantis from Kennedy Space Center for mission STS-117.
- **June 20:** NASA Day on the Hill in the Rayburn Foyer.
- **June 30:** Dawn launch from Cape Canaveral Air Force Station on a Delta II rocket.
- **Aug 9:** Launch of Space Shuttle Endeavor from Kennedy Space Center for mission STS-118.

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